Washington State Department of Health

Volume 2: Issue 4

July 12, 2004

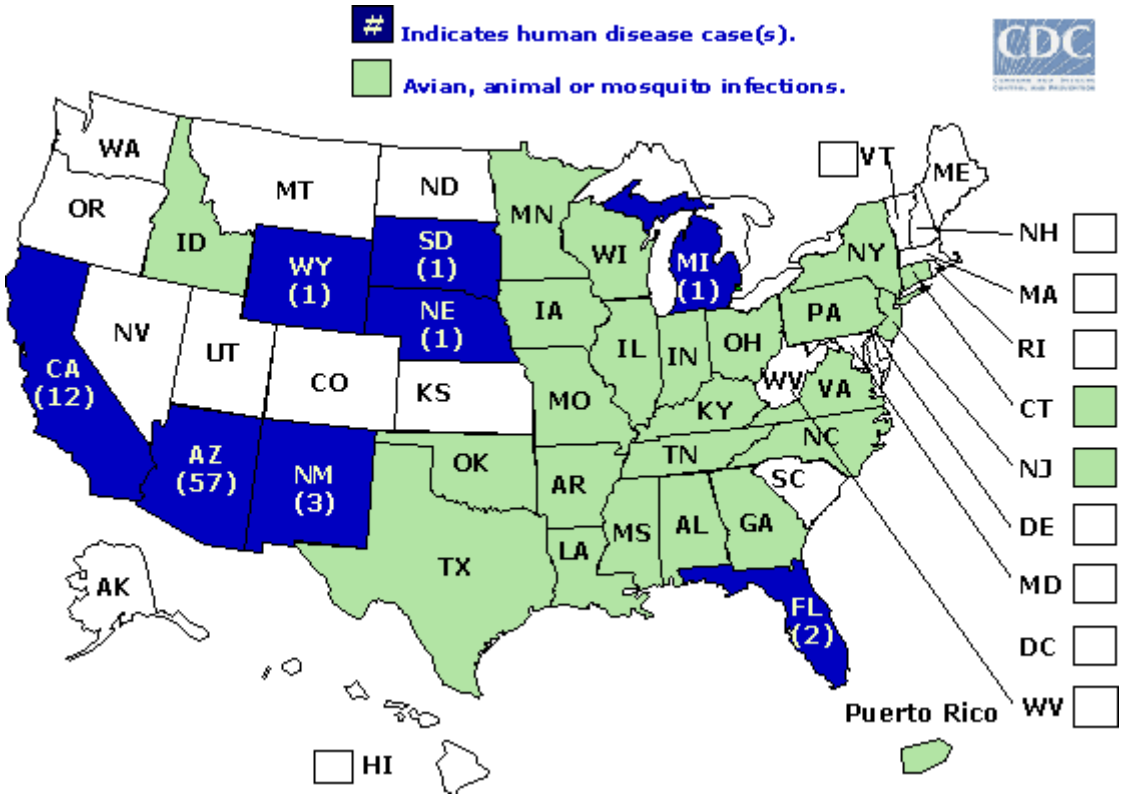
West Nile Virus Newsletter

For the second year, the Department of Health (DOH) is using this electronic newsletter as a regular communication tool for West Nile virus (WNV). It will be provided routinely throughout the summer to keep our partners informed about WNV in Washington State, as well as information from other areas of the country.

Surveillance News

Provided by the Centers for Disease Control and Prevention

2004 West Nile Virus Activity in the United States (reported to CDC as of July 6, 2004*)



As of July 6, eight states have reported a total of 78 human cases of West Nile virus (WNV) illness to CDC through ArboNET for 2004. A total of 57 cases have been reported from Arizona, 12 from California, three from New Mexico, two from Florida, and one each from Michigan, Nebraska, South Dakota, and Wyoming. Forty-seven of the 78 cases occurred in males; the median age of patients was 53 years (range: 1-84 years), and date of illness onset ranged from April 23 to June 15. Of the 78 cases, Arizona reported one fatal case.

A total of 20 presumptive West Nile viremic blood donors (PVDs) have been reported to ArboNET. Of these, 19 were reported from Arizona, and one was reported from New Mexico. Of the 20 PVDs reported to ArboNET, one person aged 69 years subsequently had neuroinvasive illness, and four persons aged 22, 51, 52 and 57 years subsequently had West Nile fever. In New Mexico, the first detected WNV activity in 2004 was in a PVD; in Arizona, three of the first seven reported human WNV infections in 2004 were in PVDs.

In addition, during 2004, a total of 861 dead corvids and 86 other dead birds with WNV infection have been reported from 24 states, and 42 WNV infections in horses have been reported from 11 states (Alabama, Arizona, California, Idaho, Missouri, North Carolina, Oklahoma, South Dakota, Tennessee, Texas, and Virginia). WNV seroconversions have been reported in 110 sentinel chicken flocks from four states (Arizona, California, Florida, and Louisiana). Three seropositive sentinel horses were reported from Puerto Rico. A total of 226 WNV-positive mosquito pools have been reported from 12 states (Arizona, California, Illinois, Indiana, Louisiana, Michigan, Missouri, New Jersey, Ohio, Pennsylvania, Texas, and Virginia).

Additional information about national WNV activity is available from CDC at http://www.cdc.gov/ncidod/dvbid/westnile/index.htm and at http://westnilemaps.usgs.gov.

Washington Non-human Surveillance Summary

Reported to Washington Department of Health as of July 12, 2004

	Horses*		Birds**		Sentinel Flocks		Mosquito Pools	
County	Tested	Positive	Tested	Positive	Tested	Positive	Tested	Positive
Adams	0	0	2	0	0	0	0	0
Asotin	0	0	1	0	0	0	0	0
Benton	0	0	9	0	0	0	0	0
Chelan	0	0	3	0	0	0	0	0
Clallam	0	0	2	0	0	0	0	0
Clark	1	0	2	0	0	0	0	0
Columbia	0	0	0	0	0	0	0	0
Cowlitz	0	0	2	0	0	0	0	0
Douglas	0	0	0	0	0	0	0	0
Ferry	0	0	0	0	0	0	0	0
Franklin	0	0	2	0	0	0	0	0
Garfield	0	0	0	0	0	0	0	0
Grant	0	0	1	0	0	0	0	0
Grays Harbor	0	0	1	0	0	0	0	0
Island	2	0	5	0	0	0	0	0
Jefferson	0	0	3	0	0	0	0	0

King	1	0	9	0	0	0	0	0
Kitsap	0	0	0	0	0	0	0	0
Kittitas	0	0	1	0	0	0	0	0
Klickitat	0	0	0	0	0	0	0	0
Lewis	0	0	4	0	0	0	0	0
Lincoln	0	0	1	0	0	0	0	0
Mason	0	0	3	0	0	0	0	0
Okanogan	0	0	0	0	0	0	0	0
Pacific	0	0	1	0	0	0	0	0
Pend Oreille	0	0	0	0	0	0	0	0
Pierce	0	0	0	0	0	0	0	0
San Juan	0	0	1	0	0	0	0	0
Skagit	0	0	2	0	0	0	0	0
Skamania	0	0	0	0	0	0	0	0
Snohomish	0	0	8	0	0	0	0	0
Spokane	1	0	8	0	0	0	0	0
Stevens	0	0	5	0	0	0	0	0
Thurston	0	0	3	0	0	0	0	0
Wahkiakum	0	0	0	0	0	0	0	0
Walla Walla	1	0	3	0	0	0	0	0
Whatcom	2	0	7	0	0	0	0	0
Whitman	0	0	0	0	0	0	0	0
Yakima	0	0	2	0	0	0	0	0
Totals	**8**	**0**	**91**	**0**	**0**	**0**	**0**	**0**

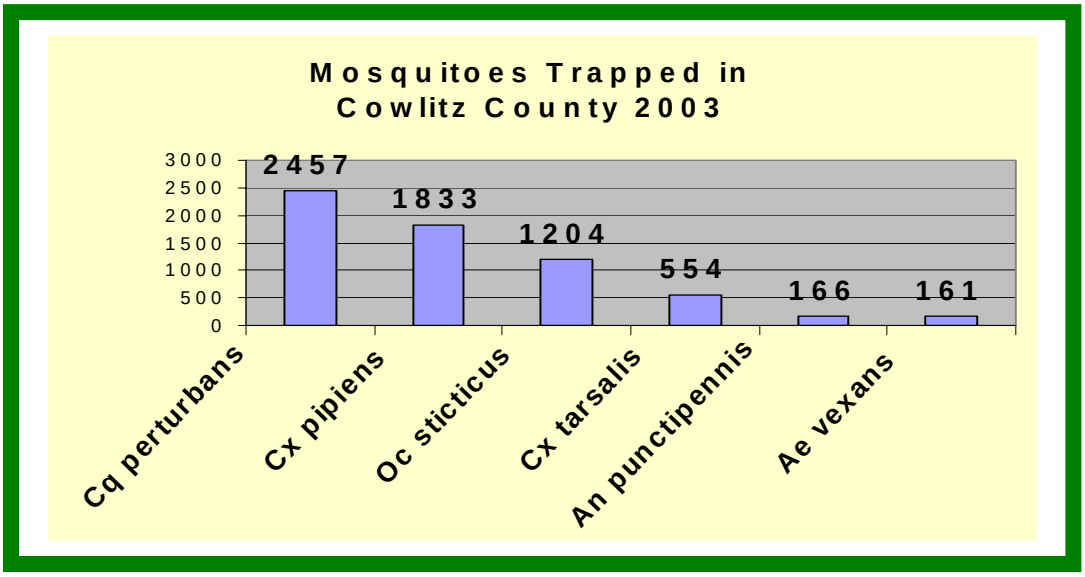
*An additional five equine tested negative, but were not included in the table because county/state information was not available.
**** An additional 40 bird specimens are pending.

Cowlitz County Finds

Submitted by Del Gilkerson, Cowlitz County Mosquito Control District

EVS (Encephalitis Vector Survey) CO_2 baited mosquito traps are supplied by the Washington State Health Department to local agencies for the collection of mosquitoes for species identification and virus testing. Here in Cowlitz County, we also use these traps to locate breeding sites, direct the adult mosquito control program, and demonstrate the effectiveness of our surveillance activities. Nineteen species of mosquitoes have been identified in Cowlitz County. Our number one problem species is *Coqullettidia perturbans*.

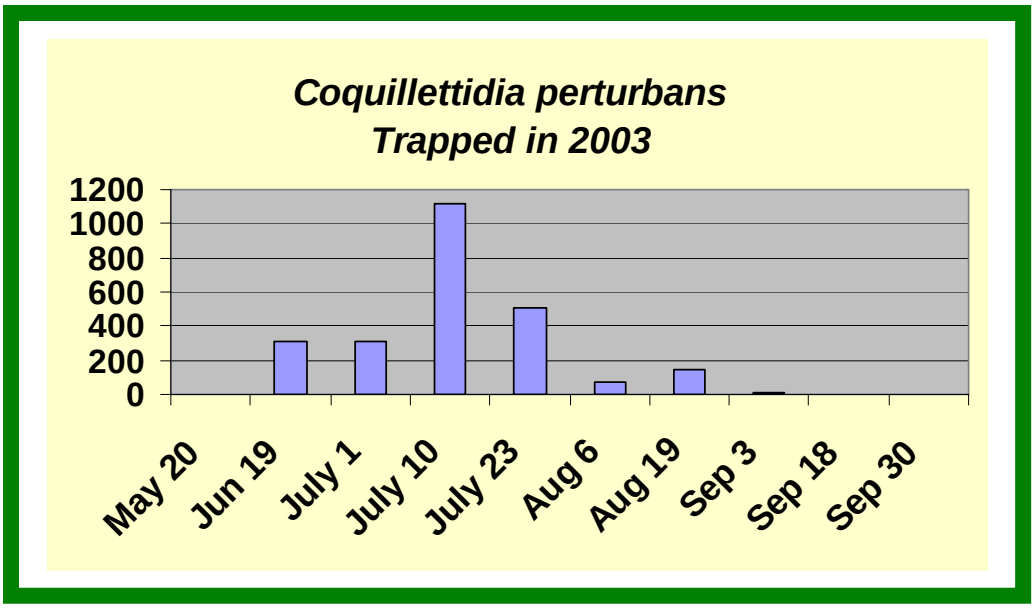
Cq. perturbans over-winter as larvae attached to roots of cattail and other aquatic plants. They pupate and emerge in late spring to early summer. Locating larvae is a time consuming and difficult task.



In Cowlitz County, Silver Lake provides excellent breeding habit. It is a shallow warm water lake with hundreds of acres of marshy wetland. Silver Lake is a popular recreational destination and the location of the first Mount St Helens Visitors Center. Seaquest State Park is sited at the northwest end of the lake. The northern shore has several hundred full time residents and many camping and picnic areas.

This year we are focusing attention on *Cq. perturbans* breeding in the lake. We hired an entomologist to identify areas needing larvae control. After little success finding larvae, we now use EVS traps to identify "hot spots" for treatment next season.

Data collected from four traps in 2003 indicate *Cq. perturbans* emerge in late June, and peak by early July.



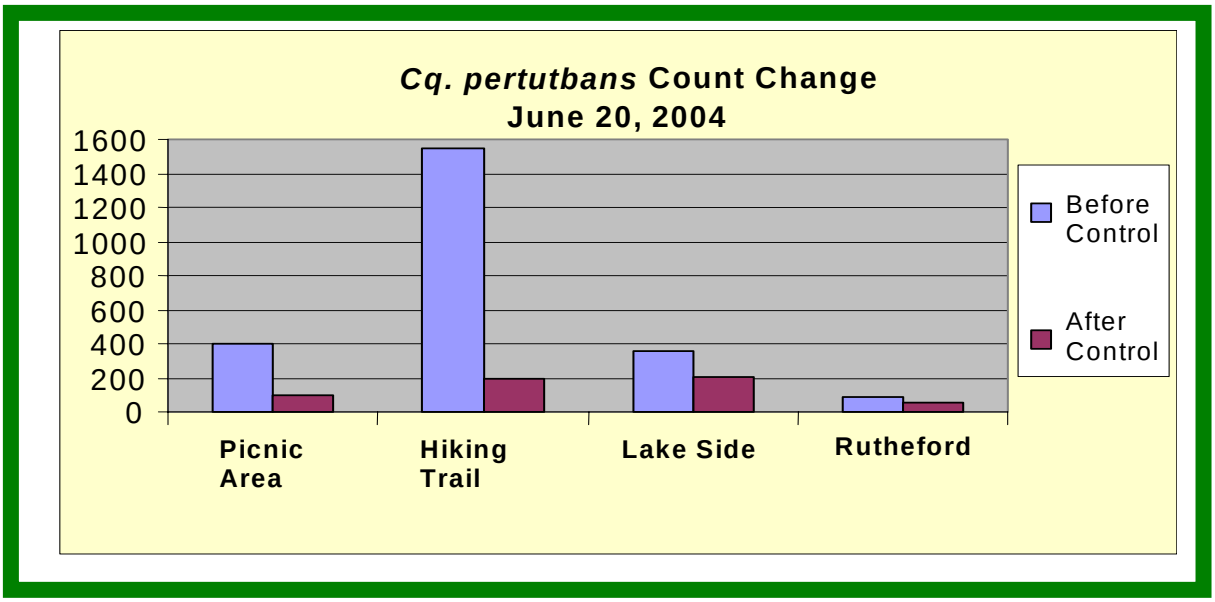
This year we chose 25 locations around the lake and began trapping June 3rd. Trapping started before emergence and continued weekly throughout the season.

With the first trapping, we found *Cq. perturbans* emerging at the northwest end of the lake. Two traps placed around the Visitor Center caught 100 females. There were one or two females in some of the other traps but it was obvious that we had located a breeding spot on our first night of trapping.

The second trapping run caught over 750 *Cq. perturbans* at the Visitor Center. We also found a second possible breeding site in floating mats of cattail north of Goat Island in the lake. This was the one area where we did find *Cq. perturbans* larvae.

After presenting this data to the park ranger, we decided to begin adult mosquito control in the day-use areas of Seaquest Park--something not done for many years. We also established a route on the northwest side of the lake and used ultra low volume (ULV) adult mosquito control treatment on that route each week.

EVS trap data demonstrate the effects of the ULV control activity. We placed four traps in areas planned for application on the evening before treatment. One day following treatment we again trapped the same four locations.



Data show a dramatic decrease in the *Cq. perturbans* population. Excellent results have allowed us to expand work in the park and continue adult mosquito control until EVS data indicate the season is over.

We continue weekly monitoring of *Cq. perturbans* emergence with EVS traps. As the season progresses, we will probably locate other breeding areas and expand ULV control routes.

Next season, we will have a better understanding of where and when *Cq. perturbans* emerge. We will choose just four or five sites around the lake and trap them each week until *Cq. perturbans* begin emerging. This will trigger our adult mosquito control activities and then reduce trapping activity to every few weeks until the season ends.

In 2005, the techniques developed this year can be used to focus on other problem areas in the county.

Community Comments

Let us hear your comments on this newsletter, your needs, or things you would like to see, by sending them to Maryanne Guichardd**,** 360.236.3391 or maryanne.guichard@doh.wa.gov

WNV Web Resources

Washington State Department of Health www.doh.wa.gov/wnv
Center for Disease Control http://www.cdc.gov/ncidod/dvbid/westnile/
Washington State University Cooperative Extension http://wnv.wsu.edu/
Cornell University, Center for Environment http://www.cfe.cornell.edu/erap/WNV
Washington State Department of Agriculture
http://agr.wa.gov/FoodAnimal/AnimalHealth/Diseases/WestNileVirus/default.htm

Article Submission

We are interested in receiving articles for future publications of the WNV newsletter. Please submit articles to Tom Gibbs, tom.gibbs@doh.wa.gov.

DOH Contact List for West Nile Virus

General Public Toll-Free Hotline 1.866.78VIRUS

Publications: Brochures/Response Plan/Fact Sheets
Laura Harper, 360.236.3380, or laura.harper@doh.wa.gov.

Surveillance: Mosquito
Jo Marie Brauner, 360.236.3064, or jomarie.brauner@doh.wa.gov.

Surveillance: Dead bird surveillance, horses, case reporting, laboratory assistance, and general WNV response
Tom Gibbs, 360.236.3060, or tom.gibbs@doh.wa.gov.

NPDES: Training, technical assistance
Ben Hamilton, 360.236.3364, or benjamin.hamilton@doh.wa.gov.

WNV in Humans: Clinical information, case reporting, and laboratory testing
Call your local health jurisdiction or DOH Communicable Disease Epidemiology, 206.361.2914 or 877.539.4344.

Assistance with news releases and media response
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